wherein

X is -O-, -S-, -NH-, [-N(R_2)] or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy when p is 2 and X is -O-;

[R_1 is R_{20}, R_{21} or R_{22}, wherein:

R_{20} is -(CH_2)$_n$- where] n is 2, 3, 4, or 5;

[R_{21} is

-CH_2-CH=CH-CH_2-,

-CH_2-C≡C-CH_2-,

-CH_2-CH=CH-CH_2-CH_2,

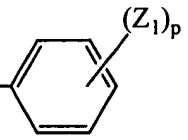
-CH_2-CH_2-CH=CH-CH_2-,

-CH_2-C≡C-CH_2-CH_2-, or

-CH_2-CH_2-C≡C-CH_2,

the -CH=CH- bond being cis or trans;

R_{22} is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1-C_6 linear alkyl group, phenyl group, or

lower alkyleneyl- 

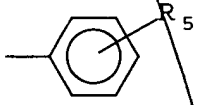
;

where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen, p is as previously defined;]

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, [monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,] -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, or -CH(OR$_7$)-alkyl[,]; [-C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;]

alkyl is lower alkyl;

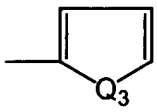
aryl is phenyl or



;

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

Q_3 is -O-, -S-, -NH-, or -CH=N-;

[W is CH_2 or CHR_8 or N-R_9;]

R_7 is hydrogen, lower alkyl, or [alkanoyl] acyl;

[R_8 is lower alkyl;

R_9 is hydroxy, alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl,

-C(=O)-aryl or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above;] and

m is 1, 2, or 3;

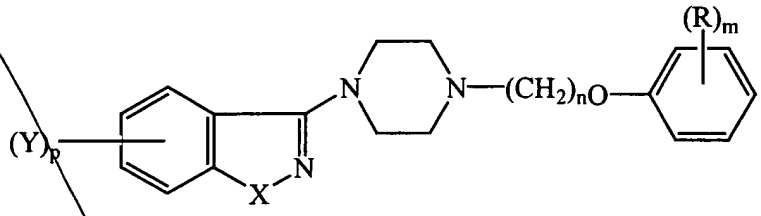
with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, [C_1=14 C_4] C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

with the exclusion of compounds wherein X is -S-, [R_1 is R_{20},] R is H, and m=1;

[all geometric, optical, and stereoisomers thereof,] or a pharmaceutically acceptable acid addition salt thereof.

9. (Amended) A compound as claimed in claim 1, wherein X is -O-, S-, or -NH-; Y is H, Cl, F. -CF_3; R is selected from the group consisting of hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, -OH, CL, F, Br, I, [acyl,] C_1-C_3 monoalkylamino, acylamino, [-NO_2-,] -NO_2, -OCF_3, -CF_3; and n is 2, 3, or 4.

25 (Twice Amended) A compound of the formula:



wherein

X is -O-, -S-, -NH-, [-N-R_2] or -N(R_2);

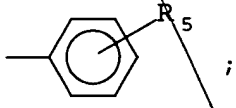
p is 1 or 2;

Y is hydrogen, Cl, Br, or F when p is 1;

Y is lower alkoxy[or halogen] when p is 2 and X is -O-;

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

aryl is phenyl or



;

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

n is 2, 3, or 4;

R is hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, [acyl, (C_2-C_{11}) alkanoyl,] Cl, F, Br, I, amino, C_1-C_3 mono- or dialkylamino, acylamino, -NO_2, -OCF_3, -CF_3, -C(=O)-alkyl, or -CH(OR_7)-alkyl;

alkyl is lower alkyl;

R_7 is hydrogen, lower alkyl, or acyl; and

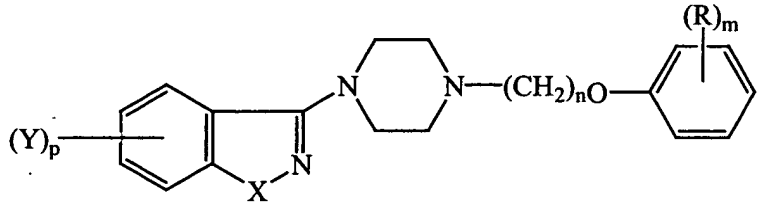
m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_3 alkyl, chlorine, fluorine, bromine, iodine, or C_1-C_3 alkoxy;

with the exclusion of compounds wherein X is -S-, R is H, and m=1;

or a pharmaceutically acceptable acid addition salt thereof.

26. (Twice Amended) A compound of the formula:



wherein X is -O-;

p is 1 or 2;

Y is hydrogen, hydroxy, Cl, Br, or F, when p is 1;

Y is lower alkoxy[, hydroxy, or halogen] when p is 2;

n is 2, 3, or 4;

R is hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, [acyl, (C_2-C_{11}) alkanoyl,] Cl, F, Br, I, amino, C_1-C_3 mono- or dialkylamino, acylamino, -NO_2, -OCF_3, -CF_3,

-C(=O)-alkyl, or -CH(OR_7)-alkyl[,];

alkyl is lower alkyl;

R_7 is hydrogen, lower alkyl, or acyl; and

m is 1, 2, or 3;

with the exclusion of compounds wherein Y is hydrogen, and R is hydrogen, C_1-C_3 alkyl, chlorine, fluorine, bromine, iodine, or C_1-C_3 alkoxy;

or a pharmaceutically acceptable acid addition salt thereof.

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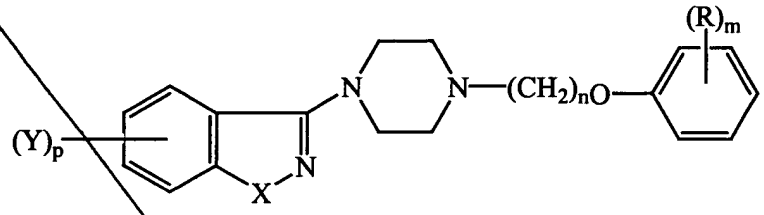
27. (Twice Amended) A compound of the formula:



wherein X is -S-;

p is 1 [or 2];

Y is hydrogen, Cl, Br, or F[, when p is 1];

[Y is lower alkoxy or halogen when p is 2;]

n is 2, 3, or 4;

R is hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, [acyl, (C_2-C_{11}) alkanoyl,] Cl, F, Br, I, amino, C_1-C_3 mono- or dialkylamino, acylamino, -NO_2, -OCF_3, -CF_3, -C(=O)-alkyl, or -CH(OR_7)-alkyl[,];

alkyl is lower alkyl;

R_7 is hydrogen, lower alkyl, or acyl; and

Sub C4

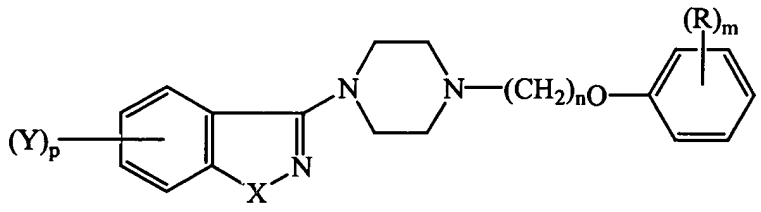
m is 1, 2, or 3;

with the exclusion of compounds wherein Y is hydrogen, and R is hydrogen, C_1-C_3 alkyl, chlorine, fluorine, bromine, iodine, C_1-C_3 alkoxy;

with the exclusion of compounds wherein R is H, and m=1;

or a pharmaceutically acceptable acid addition salt thereof.

28. (Twice Amended) A compound of the formula:



wherein X is -NH-;

p is 1 [or 2];

Y is hydrogen, Cl, Br, or F[, when p is 1];

[Y is lower alkoxy or halogen when p is 2;]

n is 2, 3, or 4;

R is hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, [acyl, (C_2-C_{11}) alkanoyl,] Cl, F, Br, I, amino, C_1-C_3 mono- or dialkylamino, acylamino, -NO_2, -OCF_3, -CF_3, -C(=O)-alkyl, or -CH(OR_7)-alkyl[,];

alkyl is lower alkyl;

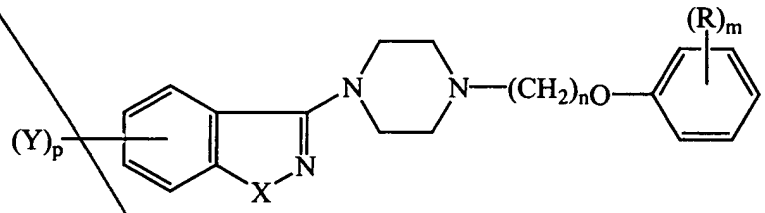
R_7 is hydrogen, lower alkyl, or acyl; and

m is 1, 2, or 3;

B4

or a pharmaceutically acceptable acid addition salt thereof.

29. (Twice Amended) A compound of the formula:



Sub CS

wherein X is -N-R_2;

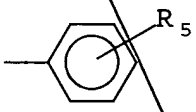
p is 1 [or 2];

Y is hydrogen, Cl, Br, or F[, when p is 1];

[Y is lower alkoxy or halogen when p is 2;]

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11}) [aroyl,] alkanoyl, and phenylsulfonyl groups;

aryl is phenyl or



;

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

n is 2, 3, or 4;

R is hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, [acyl, (C_2-C_{11}) alkanoyl,] Cl, F, Br, I, amino, C_1-C_3 mono- or dialkylamino, acylamino, $-NO_2$, $-OCF_3$, $-CF_3$, -C(=O)-alkyl, or $-CH(OR_7)$-alkyl[,];

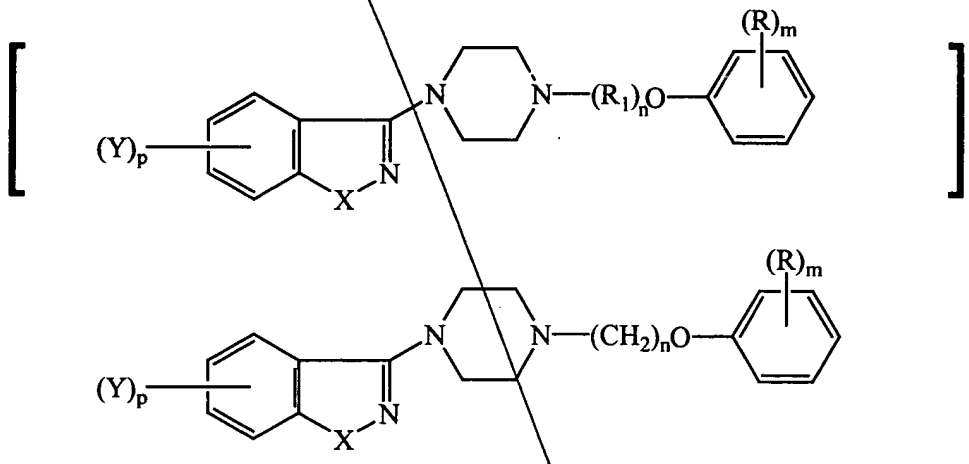
alkyl is lower alkyl;

R_7 is hydrogen, lower alkyl, or acyl; and

m is 1, 2, or 3;

or a pharmaceutically acceptable acid addition salt thereof.

30. (Twice Amended) A pharmaceutical composition, which comprises a compound of the formula:



wherein

X is -O-, -S-, -NH-, or $-N(R_2)$;

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

where aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy when p is 2 and X is -O-;

[R_1 is R_{20}, R_{21} or R_{22}, wherein:

R_{20} is $-(CH_2)_n-$ where] n is 2, 3, 4, or 5;

[R_{21} is

$-CH_2-C{=}CH-CH_2-$,

$-CH_2-C{\equiv}C-CH_2-$,

$-CH_2-CH{=}CH-CH_2-CH_2$,

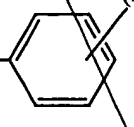
$-CH_2-CH_2-CH{=}CH-CH_2-$,

$-CH_2-C{\equiv}C-CH_2-CH_2-$, or

$-CH_2-CH_2-C{\equiv}C-CH_2$,

the -CH=CH- bond being cis or trans;

R_{22} is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least on C_1-C_6 linear alkyl group, phenyl group, or

lower alkylenyl— 

;

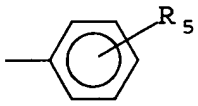
where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen, and p is as previously defined;]

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine,

bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, [monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,] -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, or -CH(OR$_7$)-alkyl[,]; [-C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;]

alkyl is lower alkyl;

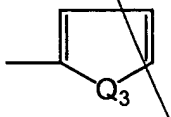
aryl is phenyl or



;

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

Q_3 is -O-, -S-, -NH-, or -CH=N-;

[W is CH_2 or CHR_8 or N-R_9;]

R_7 is hydrogen, lower alkyl, or [(C_2-C_{11}) alkanoyl] acyl;

[R_8 is lower alkyl;

R_9 is hydroxy, alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl,

-C(=O)-aryl or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above;] and

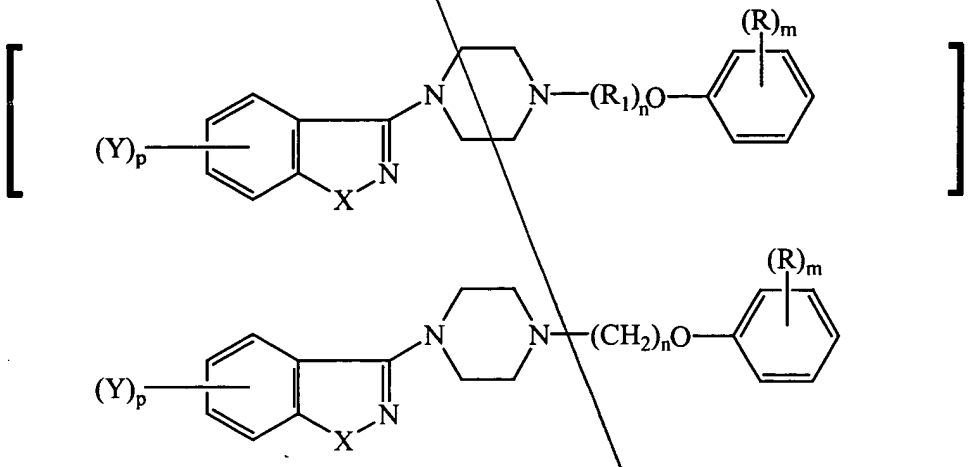
m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

with the exclusion of compounds wherein X is -S-, [R_1 is R_{20},] R is H, and m=1;

[all geometric, optical, and stereoisomers thereof,] or a pharmaceutically acceptable acid addition salt thereof, and a pharmaceutically acceptable carrier therefor.

31. (Twice Amended) An antipsychotic composition, which comprises a compound of the formula:



wherein

X is -O-, -S-, -NH-, or -$N(R_2)$;

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

where aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy when p is 2 and X is -O-;

[R_1 is R_{20}, R_{21} or R_{22}, wherein:

R_{20} is -$(CH_2)_n$- where] n is 2, 3, 4, or 5;

[R_{21} is

-CH_2-CH=CH-CH_2-,

-CH_2-C≡C-CH_2-,

-CH_2-CH=CH-CH_2-CH_2,

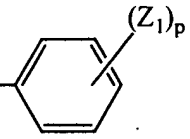
-CH_2-CH_2-CH=CH-CH_2-,

-CH_2-C≡C-CH_2-CH_2-, or

-CH_2-CH_2-C≡C-CH_2,

the -CH=CH- bond being cis or trans;

R_{22} is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least on C_1-C_6 linear alkyl group, phenyl group, or

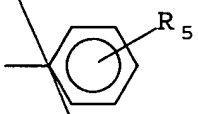
lower alkylenyl  ;

where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen, a p is as previously defined;]

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, [monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,] -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, or -CH(OR_7)-alkyl[,]; [-C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;]

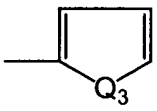
alkyl is lower alkyl;

aryl is phenyl or

 ;

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is

 ;

Q_3 is -O-, -S-, -NH-, or -CH=N-;

[W is CH_2 or CHR_8 or N-R_9;]

R_7 is hydrogen, lower alkyl, or [(C_2-C_{11}) alkanoyl] <u>acyl</u>;

[R_8 is lower alkyl;

R_9 is hydroxy, alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl,

-C(=O)-aryl or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above;] and

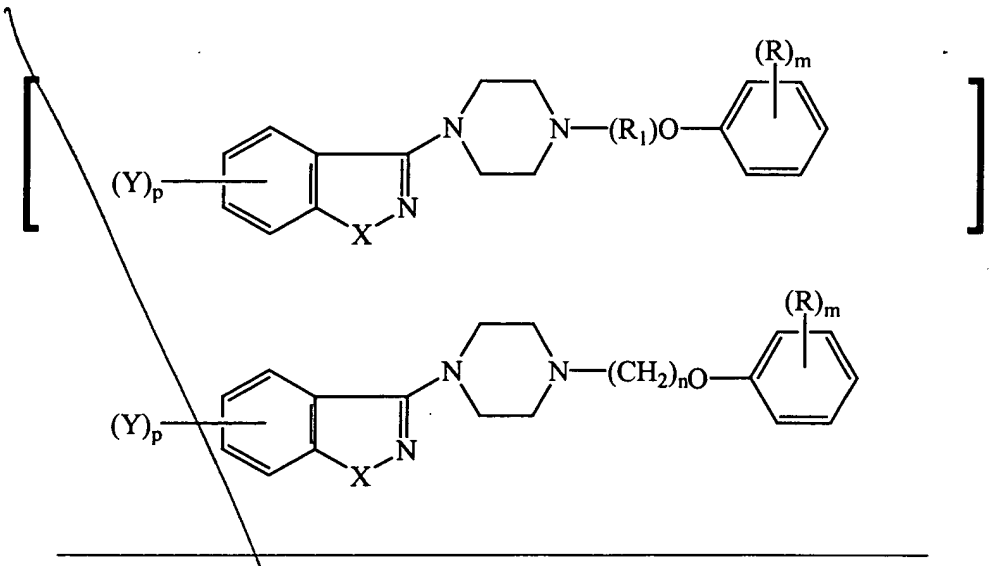
m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

with the exclusion of compounds wherein X is -S-, [R_1 is R_{20},] R is H, and m=1;

[all geometric, optical, and stereoisomers thereof,] or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

32. (Twice Amended) A method of treating psychoses, which comprises administering to a mammal a psychoses-treating effective amount of a compound of the formula:



wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

where aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy when p is 2 and X is -O-;

[R_1 is R_{20}, R_{21} or R_{22}, wherein:

R_{20} is -$(CH_2)_n$- where] n is 2, 3, 4, or 5;

[R_{21} is

-CH_2-CH=CH-CH_2-,

-CH_2-C≡C-CH_2-,

$-CH_2-CH=CH-CH_2-CH_2$,

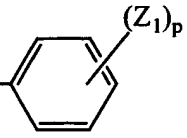
$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2$,

the -CH=CH- bond being cis or trans;

R_{22} is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least on C_1-C_6 linear alkyl group, phenyl group, or

lower alkyleneyl- 

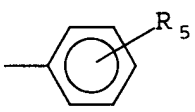
;

where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen, and p is as previously defined;]

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, [monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,] -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, or -CH(OR_7)-alkyl[,]; [-C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;]

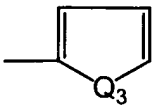
alkyl is lower alkyl;

aryl is phenyl or



;

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is 

;

Q_3 is -O-, -S-, -NH-, or -CH=N-;

[W is CH_2 or CHR_8 or N-R_9;]

R_7 is hydrogen, lower alkyl, or [(C_2-C_{11}) alkanoyl] acyl;

[R_8 is lower alkyl;

R_9 is hydroxy, alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above;] and

m is 1, 2, or 3;

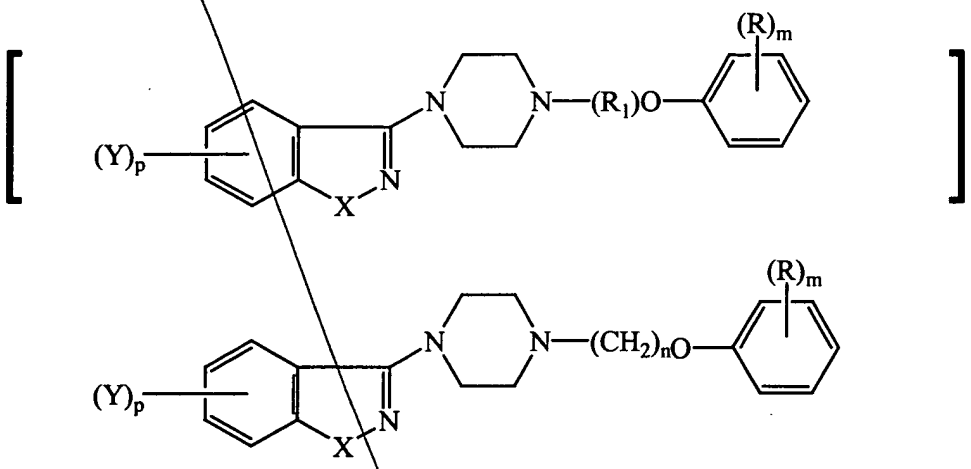
with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

with the exclusion of compounds wherein X is -S-, [R_1 is R_{20},] R is H, and m=1;

[all geometric, optical, and stereoisomers thereof,] or a pharmaceutically acceptable acid

addition salt thereof.

33. (Twice Amended) An analgesic composition, which comprises a compound of the formula:



wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

where aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy when p is 2 and X is -O-;

[R_1 is R_{20}, R_{21} or R_{22}, wherein:

R_{20} is $-(CH_2)_n-$ where] n is 2, 3, 4, or 5;

[R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2$,

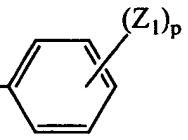
$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2$,

the -CH=CH- bond being cis or trans;

R_{22} is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least on C_1-C_6 linear alkyl group, phenyl group, or

lower alkyleneyl- 

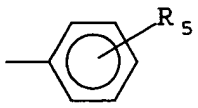
;

where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen, and p is as previously defined;]

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, [monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,] -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, or -CH(OR_7)-alkyl[,]; [-C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;]

alkyl is lower alkyl;

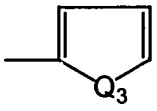
aryl is phenyl or



;

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

Q_3 is -O-, -S-, -NH-, or -CH=N-;

[W is CH_2 or CHR_8 or N-R_9;]

R_7 is hydrogen, lower alkyl, or [(C_2-C_{11}) alkanoyl] acyl;

[R_8 is lower alkyl;

R_9 is hydroxy, alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above;] and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$

where R_{23} is C_1-C_4 alkyl;

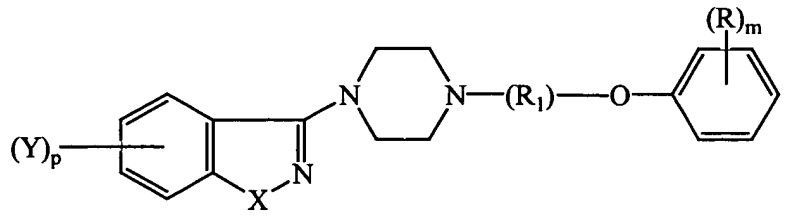
with the exclusion of compounds wherein X is -S-, [R_1 is R_{20},] R is H, and m=1;

[all geometric, optical, and stereoisomers thereof,] or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

34. (Amended) A method of alleviating pain, which comprises administering to a mammal a pain-relieving effective amount of a [compound] composition as claimed in claim 33.

Please replace claims 46, 54, 66, 74, 86-89, 92, 93, 96, and 104, all added by Preliminary Amendment dated November 9, 2000, with the following:

46. A compound of the formula



wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-

C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2-$,

the -CH=CH- bond being cis or trans;

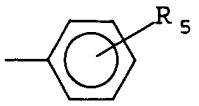
R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, dialkylaminocarbonyl, formyl,

-C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl,

-CH(OR_7)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

where alkyl is lower alkyl;

aryl is phenyl or

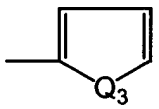


;

B5

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, trifluoromethoxy;

heteroaryl is



;

where Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl, or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen,

B5

C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

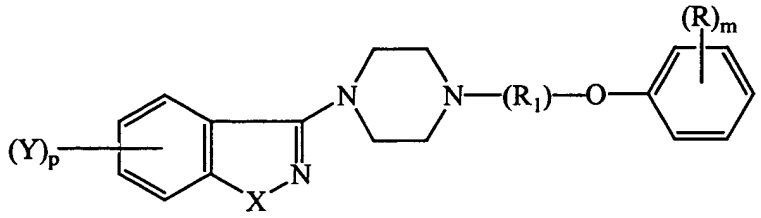
all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof.

B6

54. A compound as claimed in claim 46, wherein X is -O-, -S-, or -NH-; Y is H, Cl, F, -CF_3; R is selected from the group consisting of hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, -OH, Cl, F, Br, I, C_1-C_3 monoalkylamino, acylamino, -NO_2-, -OCF_3, -CF_3.

B7

66. A compound of the formula



wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

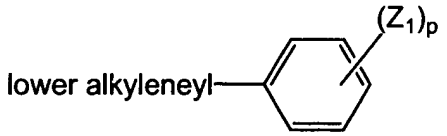
B7

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1-C_6 linear alkyl group, phenyl group or



;

---

where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen;

R_{20} is $-(CH_2)_n-$, where n is 2, 3, 4 or 5;

R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2-$,

the -CH=CH- bond being cis or trans;

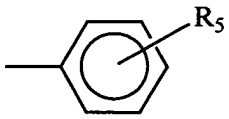
R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl,

B7

aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR_7)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

where alkyl is lower alkyl;

aryl is phenyl or



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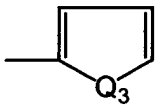
where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, trifluoromethoxy;

heteroaryl is



;

---

where Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

B7

where aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

with the exclusion of compounds wherein X is -S-, R_1 is R_{20}, R is H, and m=1;

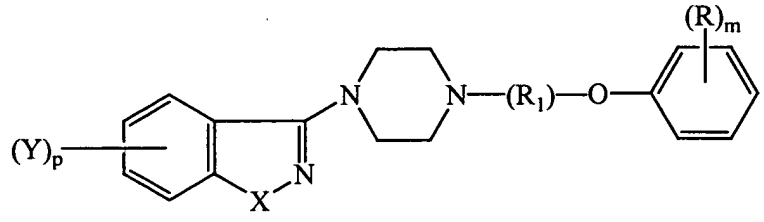
all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof.

B8

74. A compound as claimed in claim 66, wherein X is -O-, -S-, or -NH-; Y is H, Cl, F, -CF_3; R is selected from the group consisting of hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, -OH, Cl, F, Br, I, C_1-C_3 monoalkylamino, acylamino, -NO_2, -OCF_3, -CF_3; and n is 2, 3, or 4.

B8

86. A pharmaceutical composition, which comprises a compound of the formula



B9

wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is

-CH_2-CH=CH-CH_2-,

-CH_2-C≡C-CH_2-,

-CH_2-CH=CH-CH_2-CH_2-,

-CH_2-CH_2-CH=CH-CH_2-,

-CH_2-C≡C-CH_2-CH_2-, or

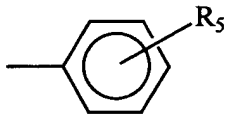
-CH_2-CH_2-C≡C-CH_2-,

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR_7)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

where alkyl is lower alkyl;

aryl is phenyl or



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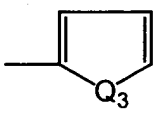
where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, trifluoromethoxy;

heteroaryl is



;

---

where Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

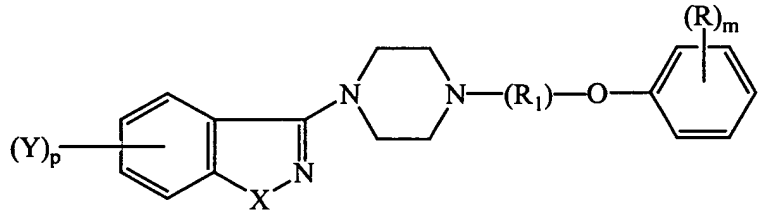
where aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, and a pharmaceutically acceptable carrier therefor.

87. A pharmaceutical composition, which comprises a compound of the formula



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wherein

B9

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

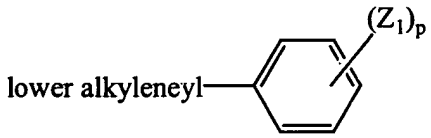
aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1-C_6 linear alkyl group, phenyl group or



;

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where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen;

R_{20} is $-(CH_2)_n-$, where n is 2, 3, 4 or 5;

R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2-$,

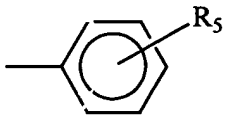
B9

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR_7)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

where alkyl is lower alkyl;

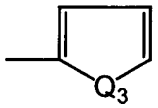
aryl is phenyl or



---

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, trifluoromethoxy;

heteroaryl is



;

---

where Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or $-NHR_{10}$; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above; and

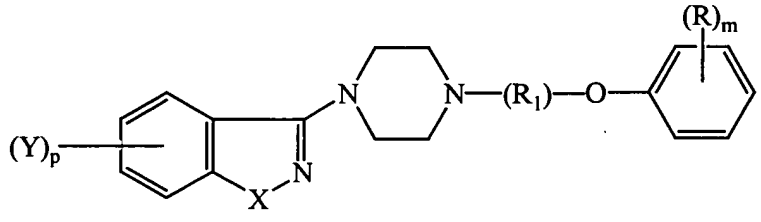
m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or $-COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

with the exclusion of compounds wherein X is -S-, R_1 is R_{20}, R is H, and m=1;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, and a pharmaceutically acceptable carrier therefor.

88. An antipsychotic composition, which comprises a compound of the formula



wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

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aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is

-CH_2-CH=CH-CH_2-,

-CH_2-C≡C-CH_2-,

-CH_2-CH=CH-CH_2-CH_2-,

-CH_2-CH_2-CH=CH-CH_2-,

-CH_2-C≡C-CH_2-CH_2-, or

-CH_2-CH_2-C≡C-CH_2-,

the -CH=CH- bond being cis or trans;

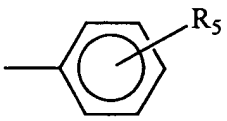
R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, dialkylaminocarbonyl, formyl,

-C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl,

-CH(OR_7)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

where alkyl is lower alkyl;

aryl is phenyl or



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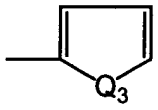
where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, trifluoromethoxy;

heteroaryl is



;

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where Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl, or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above; and

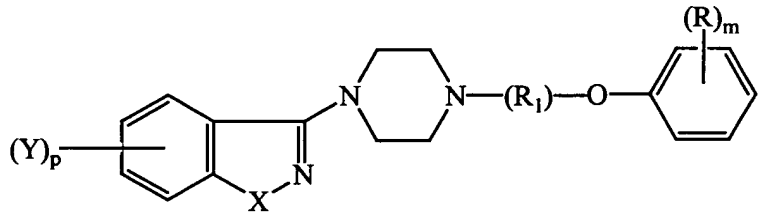
m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

B9

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

89. An antipsychotic composition, which comprises a compound of the formula



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wherein

X is -O-, -S-, -NH-, or -$N(R_2)$-;

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

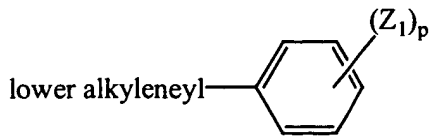
aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1-C_6 linear alkyl group, phenyl group or



;

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where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen;

R_{20} is $-(CH_2)_n-$, where n is 2, 3, 4 or 5;

R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

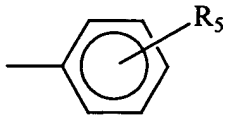
$-CH_2-CH_2-C\equiv C-CH_2-$,

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, $-CH(OR_7)$-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

where alkyl is lower alkyl;

aryl is phenyl or



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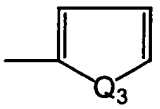
where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, trifluoromethoxy;

heteroaryl is



;

where Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl, or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

B9

with the exclusion of compounds wherein X is -S-, R_1 is R_{20}, R is H, and m=1;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

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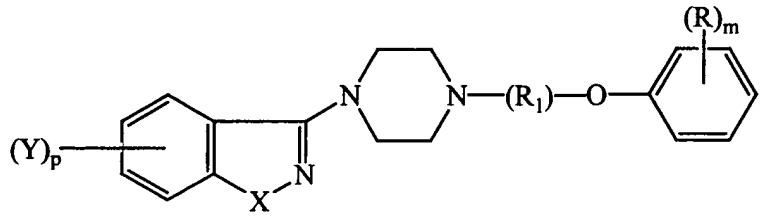
92. An analgesic composition, which comprises a compound of the formula



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wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy,

trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2-$,

the -CH=CH- bond being cis or trans;

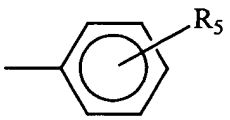
R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, dialkylaminocarbonyl, formyl,

-C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl,

$-CH(OR_7)$-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

where alkyl is lower alkyl;

aryl is phenyl or



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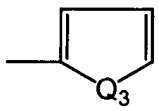
where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine,

iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, trifluoromethoxy;

heteroaryl is



;

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where Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce a pain-relieving effect,

and a pharmaceutically acceptable carrier therefor.

93. An analgesic composition, which comprises a compound of the formula

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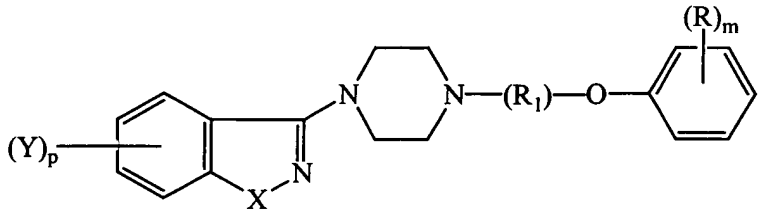


wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

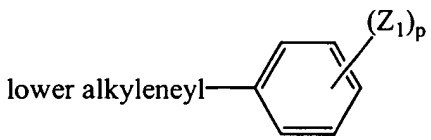
aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1-C_6 linear alkyl group, phenyl group or



;

where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen;

R_{20} is $-(CH_2)_n-$, where n is 2, 3, 4 or 5;

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R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

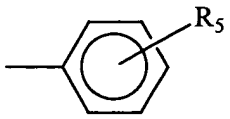
$-CH_2-CH_2-C\equiv C-CH_2-$,

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, $-CH(OR_7)$-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

where alkyl is lower alkyl;

aryl is phenyl or



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where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine,

iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, trifluoromethoxy;

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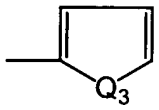
heteroaryl is



;

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where Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

with the exclusion of compounds wherein X is -S-, R_1 is R_{20}, R is H, and m=1;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid

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addition salt thereof, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

96. A compound of the formula

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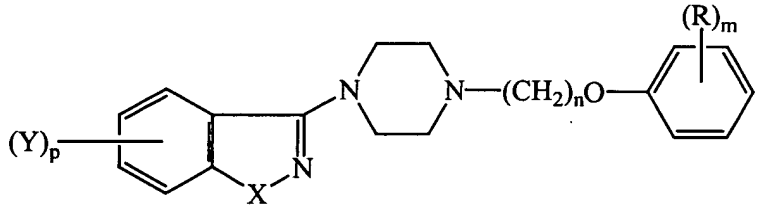


wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10})cycloalkyl, aroyl, (C_2-C_{11})alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

n is 2, 3, 4 or 5;

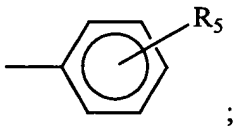
R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl,

aminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR_7)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

B11

alkyl is lower alkyl;

aryl is phenyl or



;

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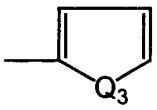
where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl,

-C(=O)-aryl or -C(=O)-heteroaryl,

B11

where aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the proviso that at least one R is selected from the group consisting of dialkylaminocarbonyl, formyl, -C(=W)-alkyl, -C(=W)-aryl, and -C(=W)-heteroaryl;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$ where R_{23} is C_1-C_4 alkyl;

with the exclusion of compounds wherein X is -S-, R is H, and m=1;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof.

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104. A compound as claimed in claim 96, wherein X is -O-, -S-, or -NH-; Y is H, Cl, F, $-CF_3$; R is selected from the group consisting of hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, -OH, Cl, F, Br, I, C_1-C_3 monoalkylamino, acylamino, $-NO_2$, $-OCF_3$, $-CF_3$; and n is 2, 3, or 4.

REMARKS

In this amendment, Patent Owner has amended claims 1, 9, 25-33, 46, 54, 66, 74, 86-89, 92, 93, 96, and 104, and cancelled claims 49 and 57. Claims 46-115 were added by Preliminary Amendment dated November 9, 2000. Thus, claims 1-48, 50-56, and 58-115 are pending.

The Examiner has indicated that claims 1-13 and 25-115 are rejected and that claims 14-